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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,580	08/04/2006	Robert-Paul Mario Berretty	NL04 0152 US1	8718
24738 7590 10/05/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS PO BOX 3001 BRIARCLIFF MANOR, NY 10510-8001				
EXAMINER				
TRAN, PHUOC				
ART UNIT		PAPER NUMBER		
2624				
MAIL DATE		DELIVERY MODE		
10/05/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/588,580

Applicant(s)

BERRETTY ET AL.

Examiner

Phuoc Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 31 recites “a computer readable medium comprising a representation of a digital image that represents spatially filtered images that are obtainable from a common source image by application of spatial filter operations with respective filter bandwidths”. The claimed “computer readable medium comprising a representation of a digital image” does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se. Merely claiming nonfunctional descriptive material, i.e., a representation of a digital image, stored on a computer readable medium does not make it statutory (note nonstatutory music is not a computer component, and it does not become statutory by merely recording it on a compact disc).

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 26, 30, 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to describe or provide support for “a computer readable medium comprising a program of machine instructions” as recited in claims 26, 30. The specification fails to describe or provide support for “a computer readable medium comprising a representation of a digital image that represents spatially filtered images that are obtainable from a common source image by application of spatial filter operations with respective filter bandwidths” as recited in claim 31. The terms “computer readable medium” and “program” are not found anywhere in the specification.

5. Claims 1-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification describes the invention with abstract mathematical equations. However, it does not clearly describe how the processor applies the abstract mathematical equations to the source image in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the specification fails to describe “a computation unit, characterized in that the true version of the surface that follows from the source image is approximated by an approximate version of the surface that is represented by a set of control points, the control points C_i controlling the position and shape of the surface S in that space, the

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computation unit being arranged to select coordinate values of the set of control points, including selection of filter bandwidth components of the coordinate values, dependent on the image signal, so that a quality of approximation is optimized” as recited in claim 1, “an image value computation circuit arranged to compute pixel values of the display image using the relative position of the locations in the matrix with respect to a set of control points, describing an approximation of the surface, the control points C_i controlling the position and shape of the surface S in that space, relative differences between the selected filter bandwidth value and filter bandwidth coordinates of the control points being computed individually for each control point that is used” as recited in claim 20, “approximating a true version of the surface, which follows from the source image, by an approximate version of the surface, whose position and shape is described by locations of a set of control points in said space; selecting coordinate values of the control points, including filter bandwidth components of the coordinate values, dependent on the content of the common source image, so as to optimize a quality of approximation of the true version of the surface by the approximate version of the surface” as recited in claim 24, and “computing pixel values of the display image using the relative position of the locations in the matrix with respect to a set of control points describing an approximation of the true version of the surface, relative differences between the selected filter bandwidth value and filter bandwidth coordinates of the control points being computed individually for each control point that is used” as recited in claim 27 in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to describe “a computer readable medium comprising a program of machine instructions” as recited in claims 26, 30 and “a computer readable medium comprising a representation of a digital image that represents spatially filtered images that are obtainable from a common source image by application of spatial filter operations with respective filter bandwidths” as recited in claim 31 in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to what is meant by "a dependence of image information" (claim 1, lines 3-4), "position in the filtered image and filter bandwidth" (claim 1, line 4), "the shape and position of the surface" (claim 1, lines 6-7).

The recitation “an image signal that represents the source image as a function of position in the image domain” (claim 1, lines 8-9) is unclear because it unclear as to what is meant by “a function of position in the image domain”.

The recitation “the control points C_i controlling the position and shape of the surface S in that space” (claim 1, line 13) is unclear because it unclear as to what is meant by “the control points C_i ” and how the control points C_i perform the controlling function.

Claim 1 recites the limitation "the shape" in line 6, "the true version of the surface" in line 11, "the control points C_i " in line 13. There is insufficient antecedent basis for each limitation in the claim.

Claims 20, 24, 27 are similarly rejected as claim 1.

Claim 21, 22 recite "a digital image generating apparatus according to claim 19". However, claim 19 is directed to "a digital image coding apparatus". It appears that claims 21, 22 should depend from claim 20.

Claim 25 recites "a digital image coding method according to claim 1. However, claim 1 is directed to "a digital image coding apparatus". It appears that claim 25 should depend from claim 24.

Claim 26 recites "the method of claim 23". However, claim 23 is directed to "a digital image coding apparatus".

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin et al (6,400,846), Greenspan et al (5956,427) relate to image processing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuoc Tran whose telephone number is (571) 272-7399. The examiner can normally be reached on MON-FRI.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phuoc Tran/

Primary Examiner, Art Unit 2624